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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,994	12/18/2000	Mikael Bisgaard-Bohr	9684	4293
26890	7590	09/21/2005	EXAMINER	
JAMES M. STOVER NCR CORPORATION 1700 SOUTH PATTERSON BLVD, WHQ4 DAYTON, OH 45479			NGUYEN, CINDY	
			ART UNIT	PAPER NUMBER
			2161	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/739,994	Applicant(s) BISGAARD-BOHR ET AL.	
	Examiner Cindy Nguyen	Art Unit 2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9,11-17 and 19-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-17 and 19-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

*kc*

*[Handwritten signature]*

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/25/05 has been entered.

#### **1. Double Patenting**

Claims 1, 3, 6, 8, 9, 11, 14-17, 19, 22-27 of this application conflict with claims 10-21 of Application No. 09/739991. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Application 09/739994	Match	Application 09/739991
Claims 11, 9 and 17		Claims 10 and 16
Claims 3,11 and 19		Claims 11, 17 and 20
Claims 6- 8, 14-16, 22-24		claims 13 and 19
Claims 25-27		claims 12, 15, 18 and 21

**2. Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**3. Claims 1, 3, 4, 7, 9,11, 12,15, 17,19, 20 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of Blinn et al. (6058373) (Blinn) and further in view of Alsberg et al. (US 20010032162) (Alsberg).**

Regarding claims 1, 9 and 17, Fayyad disclose: a method, an apparatus for a data structure, for analyzing retail transactional data in a computer-implemented data mining system (12, fig. 2 and corresponding text, Fayyad), wherein the data structure is a data model that defines the manner in which said retail transaction data is stored and organized within said data mining system said data model (12, fig. 2 and corresponding text, Fayyad).

However, Fayyad didn't disclose: a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data. On the other hand, Blinn discloses: a basket table that contains summary information about the retail transactional data (fig. 5 and 6 and corresponding text, Blinn), an item table that

contains information about individual items referenced in the retail transactional data (fig. 8A-B and corresponding text, Blinn), and a department table that contains aggregate information about the retail transactional data (fig. 10 and corresponding text, Blinn). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include summary table about transactional data, table contains information about individual items referenced data and department table that contains aggregate information about the transaction data in the system of Fayyad as taught by Blinn. The motivation being to enable system allows merchants to easily customize the electronic merchandising system for diverse sales transactions (col. 2, lines 10-19, Blinn).

However, Fayyad/Blinn didn't disclose: the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior. On the other hand, Alsberg discloses: the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior (paragraphs 0091, Alsberg). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior in the combination system of Fayyad/Blinn as taught by Alsberg. The motivation being to enable the user to group the useful information about the transactional data into subgroups and to organize data in the data mining system.

Regarding claims 3, 11 and 19, most of the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition Fayyad/Blinn/ Alsberg disclose: Wherein the cluster analysis groups the transactional

data into coherent groups according to perceived similarities in the transactional data (col. 8, lines 35-64, Fayyad).

Regarding claims 4, 12 and 20, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Fayyad/Blinn/Heckerman discloses: wherein the data model is stored in a relational database managed by a relational database management system (col. 13, lines 24-33, Blinn).

Regarding claims 5, 13 and 21, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Blinn/Alsberg discloses: wherein the data model is accessed from a relational database managed by a relational database management system (col. 16, lines 1-12, Blinn).

Regarding claims 7, 15 and 23, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Blinn/Alsberg disclose: wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis (paragraphs 0192, Alsberg).

Regarding claims 25-27, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Blinn/ Alsberg disclose: wherein the cluster analysis utilizes a Gaussian Mixture Model (120, fig. 4 and corresponding text and col. 9, lines 22-67, Fayyad).

**4. Claims 6, 8, 14, 16, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of Blinn et al.**

**(6058373) (Blinn) and further in view of Alsberg et al. (US 20010032162)**

**(Heckerman) and further in view of Lazarus et al. (U.S 6430539) (Lazarus).**

Regarding claims 8, 16 and 24, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Fayyad/Blinn/ Alsberg /Lazarus discloses: wherein the data model is comprised of one row per transaction in the transactional data (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include transaction step of one row per transaction in the transaction data in the combination system of Fayyad/Blinn/ Alsberg as taught by Lazarus. The motivation being to enable the user to process one transaction data at the time to avoid corruption of data by the system.

Regarding claims 6, 14 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Blinn/ Alsberg /Lazarus discloses: wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is mapped into a single flat table in the combination system of Fayyad/Blinn/Heckerman as taught by Lazarus). The motivation being to enable the user to implement data model into a single format and classifying data in the table.

**1. Contact information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*cn*

Cindy Nguyen  
July 21, 2004

*Frantz Coby*  
**FRANTZ COBY**  
**PRIMARY EXAMINER**